Poisoning in children- An overview

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Abstract

Poisoning is a very common problem. Clinical spectrum varies from non specific symptoms to life threatening symptoms. Toddlers are more prone for poisoning because they want to explore and taste everything.

Keywords: Childhood poisoning, gastric lavage, poisoning prevention

Introduction

Poisoning occurs when any substance interferes with normal body functions after it is swallowed, inhaled, injected or absorbed. Its spectrum varies from place to place, depending upon age, sex, socioeconomic status & demography [1]. They are commoner among children & are mostly accidental due to their exploratory hand-to-mouth activity. Among older children intentional overdoses & substance abuse can occur.

Common substances causing childhood poisoning include Cosmetics, Automobile fluids, Household cleaning products, Medications, Foreign objects, Paints, Pesticides, Plants, Alcohol, Corrosives, Bacterial toxins causing food poisoning like E. coli, Heavy metals & venom found in the bites and stings of some animals and insects. Majority of poisonings may be asymptomatic with slow absorption & delayed presentation. Common modes of presentation include Vomiting, Altered sensorium, Convulsions, Diarrhea, Urinary incontinence, Drooling of saliva, Pain & swelling at bite site, Odour of poison, Restlessness / agitation, Fever, Hematuria, Hematemesis, Respiratory distress, Red hot skin, Headache, Blurring of vision, Anuria & Redness of face and eyes, burns.

Gastrointestinal decontamination is recommended in recent ingestion & in symptomatic children only. Activated charcoal is safest & reduces amount of drug absorption by adsorbing many toxins except metals, alcohols & petroleum distillates [3]. Multiple dosing is required for drugs with entero-enteric circulation such as theophylline & carbamazepine. Gastric lavage is contraindicated in poisonings by hydrocarbons, acids &
alkalis [4]. There is no role of emetics [5]. Whole-bowel irrigation with Polyethylene glycol is useful for ingestions like lead paint, iron tablets & batteries [6]. Urinary alkalization with sodium bicarbonate increases elimination of drugs like salicylate, isoniazid, phenobarbitalone, dichlorophenoxyacetic acid & chlorpropamide [7]. Extracorporeal therapy like Haemodialysis, charcoal haemoperfusion, plasmapheresis, exchange transfusion & continuous ultrafiltration techniques are useful for poisonings with theophylline, lithium, salicylates, methanol, vancomycin, isopropanol poisoning & ethylene glycol [8]. Dialysis is helpful when concomitant electrolyte or acid-base disturbance exists. Haemoperfusion is better for toxins with low water solubility & haemofiltration removes compounds with high molecular weight.

About 1/3rd of under 5 children with accidental poisoning will subsequently have a second episode. Adequate supervision, safe placement of medications and toxic chemicals with child-safe cabinets & containers out of reach of children have a valid role in preventing accidental poisonings [9]. With the use child-resistant containers, reducing pack sizes of drugs, prompt suspicion and referral to poison centre may reduce deaths in children from poisoning [10].

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**References**


